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# Technical Data



PUBLISHED PERIODICALLY BY RESEARCH DEPARTMENT, LAWRENCE ROBINSON & SONS, MODESTO, CALIFORNIA, U. S. A.

## DISEASES OF THE CANTALOUPE

### Symptoms, Causes, and Controls

Please save for reference.  
Additional copies on request.

We give no warranty, express or implied, as to the productiveness of any seeds or bulbs we sell and we will not be in any way responsible for the crop. Our liability in all instances is limited to the purchase price of the seed.

For easy reference, common diseases of the CANTALOUPE are discussed below with their causes, symptoms, and the most effective controls we've been able to determine to date; however, please bear in mind that control effectiveness varies with locality and season -- no guarantee is implied in these recommendations.

#### ANTHRACNOSE:

**SYMPTOMS:** Small, yellowish or water-soaked spots appear on leaves, enlarge rapidly turning brown. Elongated spots, similar to those on leaves may occur on vines. Fruit develops dark, sunken canker areas, varying in diameter from  $\frac{1}{4}$ " to more than 1". Salmon-colored mold may appear on spots.

**CAUSES:** A FUNGUS ORGANISM which over-winters in diseased host-plant decayed material and diseased seed.

#### CONTROLS:

(1) Rotate crop so that no Cantaloupes are planted in succession.

(2) Dusting:

(a) 6% Yellow Cuprocide, 10% Arsenate, 84% Talc.

(b) 14% Copper-A Compound; 10% Calcium Arsenate, 76% Talc.

**METHOD:** As soon as young plants appear, begin weekly dusting with either (a) or (b) formulas and continue until vining begins. After vining begins, change to formulas (c) or (d) below, which also are helpful in combating APHIDS and CUCUMBER BEETLES.

(c) 10% Calcium Arsenate; 30% Black Leaf 40; 6% Yellow Cuprocide; 54% Talc.

(d) 10% Calcium Arsenate; 30% Black Leaf 40; 14% Copper-A Compound; 46% Talc.

**NOTE:** As fruit maturity approaches, Black Leaf 40 probably will not be needed, therefore, formulas (a) or (b) at this stage should prove satisfactory.

#### BACTERIAL WILT:

**SYMPTOMS:** One runner will wilt and die. Within few days, entire plant will wilt, death following. To determine disease, cut cross-section of affected vine and expose to air for few minutes, press ends together, separate and thin strands of bacterial wilt will string out.

**CAUSES:** A BACTERIAL ORGANISM, over-wintering only in body of adult Cucumber Beetle.

#### CONTROLS:

(1) At first appearance of disease, remove all infected plants from field.

(2) Cucumber Beetle is most serious factor in spreading of disease, control of which can largely solve the problem. DUSTING is best control and enumerated below, are effective formulas.

(a) 10% Calcium Arsenate, 90% Talc.



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#### BACTERIAL WILT:

factory.

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(d) 10% Calcium Arsenate, 30% Black Lead, 10% Copper-A Compound, 40% Talc.  
(c) 10% Calcium Arsenate, 30% Black Lead, 10% Yellow Cuprocide, 54% Talc.

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METHOD: As soon as young plants appear, begin weekly dusting with either  
(b) 14% Copper-A Compound, 10% Calcium Arsenate, 70% Talc.  
(c) 6% Yellow Cuprocide, 10% Arsenate, 84% Talc.

(1) Rotate crop so that no Cantaloupes are planted in succession.  
CONTROLS:

material and diseased seed.

CAUSES: A FUNGUS ORGANISM which over-winters in diseased host-plant decayed

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rapidly turning brown. Elongated spots, similar to those on leaves may occur  
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#### Symptoms, Causes, and Controls

#### DISEASES OF THE CANTALOUPE





BACTERIAL WILT (CONT'D)

CONTROLS:

- (b) Same formulas and application technique as outlined in controls for ANTHRACNOSE under headings (a), (b), (c), (d), will be found effective in control of both the BEETLE and WILT BACTERIA.

MACROSPORIUM LEAF BLIGHT:

SYMPTOMS: First spots to appear on leaves are small, circular and slightly water-soaked. They enlarge and show concentric rings and a definite margin on the upper side of leaf. Spots vary in diameter from pinpoint to  $\frac{1}{2}$ " or more.

CAUSES: FUNGUS ORGANISM, over-wintering on diseased host-plant and diseased seed.

CONTROLS:

- (1) Proper crop rotation.
- (2) Treatment of seed with Spergon or Arasan before planting.
- (3) Formulas as outlined in controls for ANTHRACNOSE under headings (a), (b), (c), (d), are effective for MACROSPORIUM LEAF BLIGHT.

POWDERY MILDEW:

SYMPTOMS: Leaves and young stems develop circular, whitish, powdery spots, which shortly turn brown and dry. In severe cases, plants become yellowish and leaves die.

CAUSES: A FUNGUS ORGANISM carried by wind and water. Over-winters in infected plants. Host plants: Cucumber, Squash, Pumpkin, Gourd.

CONTROLS:

- (1) Extremely difficult to chemically control.
- (2) In areas subject to mildew attacks, plant resistant varieties as outlined in our listings.

FUSARIUM WILT:

SYMPTOMS: In some instances, confused with Bacterial Wilt. Disease can appear at almost any growth stage---seedlings before they break soil---older seedlings with a root rot---still others may show signs of wilting with no visible evidence of infection. When disease strikes more mature plants, one runner at a time wilts followed with dark-brown lesions on the stem, close to ground. When no infection occurs until after fruits approach maturity, fruit rot appears in stem-end of fruit.

With certain moisture conditions, dead lesions on infected plants develop and become covered with salmon-colored masses of fungus spores.

CAUSES: A FUNGUS ORGANISM carried on seed. This organism can live many years in the soil.

CONTROLS:

- (1) Very difficult to control. Some results have been obtained by treating seeds with Arasan, Semesan and Spergon, prior to planting.

This issue of TECHNICAL DATA covering DISEASES OF THE CANTALOUPE, is second in its group, covering principal diseases, their causes, symptoms of all of the cucurbit species.

So many of our good friends and customers have written in for regular mailings of additional copies for their sales staffs that we hardly find it necessary to mention again that additional copies of any number are available for you without cost -- this bulletin, and all subsequent ones. Increase your dealer's confidence in you and in YOUR STOCKS by having at your salesman's fingertips, information of this nature, by which they can intelligently inform.

In closing, we might say that information of this type must, of necessity be generalized. In certain areas, new specialized types of controls have been used and found successful, which are not covered in this bulletin. We would be very glad to correspond with you, or any of your salesmen on any particular problems developing in your territory.

LAWRENCE ROBINSON & SONS

Research Department



